ISO 14155:2020

Bridging the way to the EU MDR 2017/745

Written by Dr. Holger Kloess, Senior Consultant at QUNIQUE

The third version of ISO 14155:2020 "Clinical investigation of medical devices for human subjects — Good clinical practice" [1], recently published, closed several gaps which were already anticipated by the EU MDR 2017/745 [2]. Emphasis has been outlined on the risk-based approach for clinical investigations, driven by risk management, as well as higher requirements on clinical quality management. Till now, the standard was set mainly for conducting pre-market trials for medical devices following good clinical practice methodologies, but this has been replaced by the life-cycle approach within the revised version of the standard (Annex I, informative). Medical device manufacturers now have the appropriate tools to address the clinical data requirements over the expected lifetime of their medical device(s) (Fig. 1).

Figure 1: Life-cycle Management of Medical Devices according to ISO 14155:2020

INNOVATIONS FOR CLINICAL TRIALS

- Life-cycle application of GCP to pre-market and post-market device trials
- Robust trial design principles and statistical requirements
- Predefined risk tolerance limits and clinical safety thresholds (ISO 14971)
- Full quality control including clinical procedures and audits

With the EU MDR 2017/745, there is a new focus of the legislators in Europe on the type of clinical investigation to be conducted for non-CE marked devices. It is now more clear for the various stakeholders that investigator-initiated trials (IITs), Post-Market Studies or retrospective clinical investigations are not presenting the regulatory compliant methods to meet the requirements on medical device manufacturers for non-CE marked devices, when showing compliance with the general safety and performance requirements (GSPRs) and in particular the requirements on sufficient clinical data of the EU MDR 2017/745 Article 61(1).

This is important for both new and legacy devices, as clearly explained in the MDCG 2020-6 Regulation (EU) 2017/745: Clinical evidence needed for medical devices previously CE marked under Directives 93/42/EEC or 90/385/EEC - A guide for manufacturers and notified bodies [3].

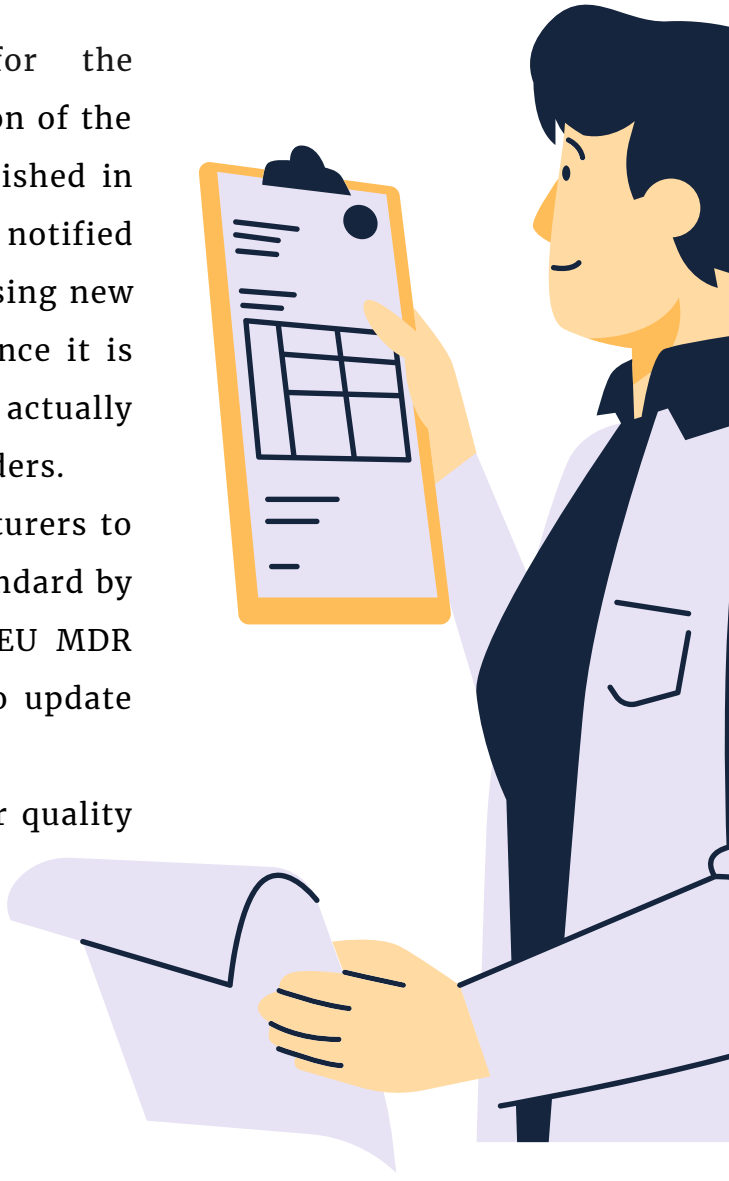
The approach to rely on existing and retrospective collected clinical data, might not might fulfil all relevant requirements to justify sufficient clinical data set by the EU MDR 2017/745 for legacy devices. Therefore new prospective clinical investigations might be necessary to show compliance to the applicable GSPRs.

What are the main points to consider for future clinical investigations?

- Reinforcement of risk management throughout the process of a clinical investigation.
- Justification of the study type and emphasis on statistical considerations (e.g., patient population and stratification).
- Clinical quality management including audits.
- Risk-based monitoring (e.g., monitoring plan).
- Choosing the appropriate clinical investigation site (marketing vs. clinical/regulatory requirements).
- Clinical investigation site qualifications (e.g., recent GCP trainings).
- Obligation to publish the investigation's results, whether positive, inconclusive or negative.
- Registration in public database.

There is no formal transition time for the implementation set in the newly released version of the standard. Even if this standard is not yet published in the official journal of the European Union, notified bodies and authorities will apply it when assessing new Clinical Investigation Protocols and Reports since it is reflecting the current state of the art which is actually an additional obligation on the various stakeholders.

It is recommended for medical device manufacturers to perform a gap analysis towards this revised standard by considering the specific requirements of the EU MDR 2017/745 on clinical investigation, and then to update the relevant clinical
investigation procedures and templates in their quality management system accordingly.



What will be the best practice for writing the clinical investigation report (CIR) of ongoing clinical investigations?

Since the outline of the CIR is now a normative Annex of the standard (Annex D), medical device manufacturers are recommended to write the CIRs of clinical investigations which were initiated under the new revision of the standard by following the current standard accordingly.
This approach will reduce the number of questions from competent authorities, notified bodies and when relevant ethics committees.

Conclusion and benefits

In summary, the recent update of ISO 14155:2020 – "Clinical investigation of medical devices for human subjects — Good clinical practice" provides medical device manufacturers and investigators with clear recommendations and prerequisites on the life-cycle management of their medical device(s) on the road for certification under the EU MDR 2017/745.
Although the full application of EU MDR 2017/745 was postponed by one year to 26th May 2021, the transition period has not change and ends on 25th May 2024. Therefore, it is essential to use the remaining time wisely securing the supply of medical devices, on which patients and healthcare professionals depend!

If you need support in analysing your clinical strategy and/or your clinical evidence and/or planning pre-/post-market clinical investigations for either legacy or new devices according to the requirements of EU MDR 2017/745 and the applicable ISO 14155:2020, our subject matter experts can assist you reaching your specific goal in the most efficient and compliant manner. QUNIQUE is focused on offering tailored solutions that fit the specific context and resource framework.

About the author:

Holger Kloess is a senior consultant at the QUNIQUE GmbH office in Switzerland, where he is responsible for EU quality and regulatory compliance for medical and in vitro diagnostic devices. He has more than 10 years' experience in the medical device industry.
Holger has a Master's degree in Biology from the University of Osnabrück.

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References:

1. *ISO 14155:2020 - Clinical investigation of medical devices for human subjects — Good clinical practice (https://www.iso.org/standard/71690.html)*
2. *EU MDR 2017/745 (https://eur-lex.europa.eu/eli/reg/2017/745/2020-04-24)*
3. *MDCG 2020-06: Regulation (EU) 2017/745: Clinical evidence needed for medical devices previously CE marked under Directives 93/42/EEC or 90/385/EEC - A guide for manufacturers and notified bodies (https://ec.europa.eu/health/sites/health/files/md_sector/docs/md_mdcg_2020_6_guidance_sufficient_clinical_evidence_en.pdf)*